We claim:

1. A device for detecting deposits on surfaces, comprising:

at least one body having a surface on which deposits occur and influence reflection properties of said surface to electromagnetic radiation;

at least one transmitter for transmitting electromagnetic radiation to said at least one body, said at least one transmitter being connected to said at least one body; and

at least one detector for detecting the presence of the deposits at said surface, said at least one detector being connected to said at least one body and measuring electromagnetic radiation received from said at least one transmitter after reflection at said surface.

2. The device according to claim 1, wherein said at least one transmitter introduces the electromagnetic radiation into said at least one body and the electromagnetic radiation reaches said at least one detector after internal reflection at said surface.

3. The device according to claim 2, wherein the electromagnetic radiation reaches said at least one detector after multiple internal reflections in said at least one body.

4. The device according to claim 1, wherein said at least one transmitter emits electromagnetic radiation at a predetermined wavelength dependent on a degree of change in electromagnetic radiation reflection properties by the deposits on said surface.

5. The device according to claim 4, wherein said predetermined wavelength is selected to correspond to a maximum degree of change in electromagnetic radiation reflection properties by the deposits on said surface.

6. The device according to claim 1, wherein said at least one detector is two detectors disposed with respect to said at least one transmitter to create paths of the electromagnetic radiation from said at least one transmitter to said two detectors having different lengths inside said at least one body.

7. The device according to claim 1, wherein said at least one transmitter is two transmitters disposed with respect to said at least one detector to create paths of the electromagnetic radiation from said two transmitters to said at least one detector having different lengths inside said at least one body.

8. The device according to claim 1, wherein said at least one body has a point at which the electromagnetic radiation is introduced at said at least one body and another point at which the electromagnetic radiation reaches said at least one detector, and said point and said another point are adjacent to one another.

9. The device according to claim 8, wherein:

said at least one body has a silvered surface for reflecting the electromagnetic radiation and an inside; and

said silvered surface directed toward said inside of said at least one body and substantially reflects the electromagnetic radiation for guiding the electromagnetic radiation to said at least one detector.

10. The device according to claim 7, wherein:

said at least one body is a light-guiding body; and

the electromagnetic radiation propagates inside said light-guiding body on a helical path.

11. The device according to claim 1, wherein:

said at least one body is a light-guiding body; and

the electromagnetic radiation propagates inside said light-guiding body on a coiled path.

12. The device according to claim 1, wherein said at least one body is made of a material having a refractive index greater than a refractive index of a medium surrounding said at least one body.

13. The device according to claim 12, wherein said medium is water.

14. The device according to claim 12, wherein said material is glass.

15. The device according to claim 1, including:

a connecting piece; and

a sensor part having said at least one body and being detachably connected to said connecting piece.

16. The device according to claim 1, wherein said at least one body one of spiral-shaped, coiled, and reel-shaped.

17. The device according to claim 1, wherein said at least one transmitter introduces the electromagnetic radiation into said at least one body at an angle maximizing a number of internal reflections of the electromagnetic radiation at said surface.

18. The device according to claim 1, wherein:

said at least one body has a central axis; and

said at least one transmitter introduces the electromagnetic radiation into said at least one body in a beam inclined at an angle relative to said central axis.

19. The device according to claim 18, wherein said beam has a minimum amount of divergence.

20. The device according to claim 1, wherein said surface of said at least one body is disposed in a liquid-conveying machine.

21. The device according to claim 1, wherein said surface of said at least one body is disposed in a washing machine.

22. The device according to claim 1, wherein said surface of said at least one body is disposed in a dishwasher.

23. A method for detecting deposits on surfaces, which comprises:

transmitting electromagnetic radiation from at least one transmitter;

reflecting the electromagnetic radiation at a surface of a body on which exist deposits influencing reflection properties for the electromagnetic radiation; and

detecting the reflected electromagnetic radiation with at least one detector.

24. The method according to claim 23, which further comprises:

introducing the electromagnetic radiation into the body; and

detecting the electromagnetic radiation after internal reflection on the surface of the body.

25. The method according to claim 23, which further comprises performing the transmitting, reflecting, and detecting steps in a liquid-conveying machine.

26. The method according to claim 23, which further comprises performing the transmitting, reflecting, and detecting steps in a washing machine.

27. The method according to claim 23, which further comprises performing the transmitting, reflecting, and detecting steps in a dishwasher.

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